

FIGURE 1

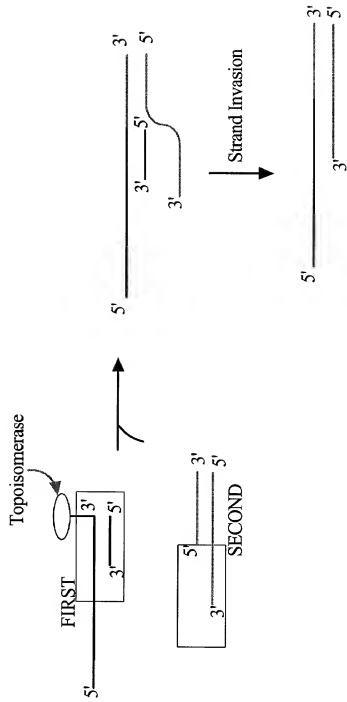


FIGURE 2

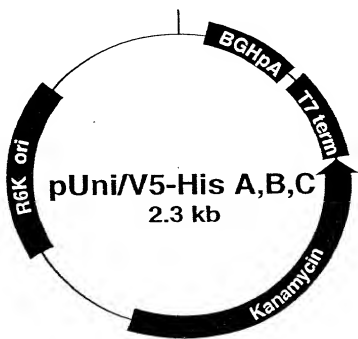


FIGURE 3

MULTIPLE CLONING SITE

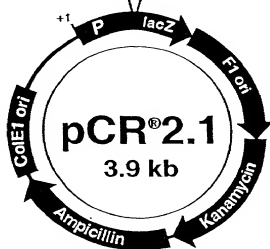
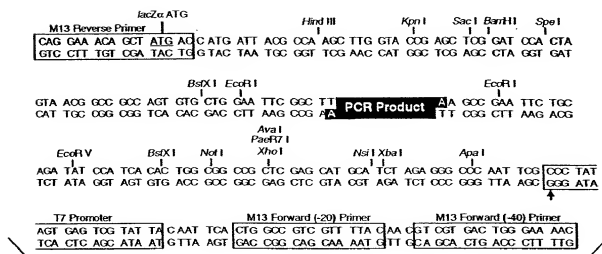
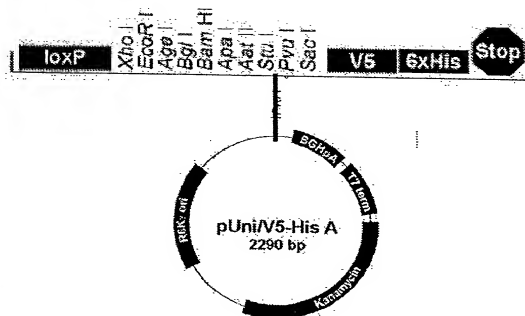


FIGURE 4

Sequence of pUni/V5-His version A

AATTCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTC
 AGTGGCTTACATCCCTGGCTTGTGTGCCAACCCGTTAAACCTTAAAGCTTTAAAGCCCTTATATATTC
 TTTTITTTCTTATAAACTTAAACCTTAGAGGCTATTAAAGTTGCTGATTATATTAATTTTATGTTC
 AAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCGATGAGAGCTTAGTACGTTAGCC
 ATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGA
 GAGCTTAGTACGTACTATCAACAGTTGAACGTCTGATCAACAGATCCTCTACGCGGCCGCGGTACCAT
 ACTTGTATAGCATACATTATACGAAGTTATCGGAGGAATTGGCTCGAGGAATTCACCGGTGCGGTGTGG
 GCGGATCGGGGCCGACGTCAGGCTCGATCGGAGCTCGGTAAGCCTATCCCTAACCCCTCTCTCGGTT
 CGATTCTAGCCATCATCACCATCACCATTGAAGCTCGCTATCAGCCTCGACTGTGCTTCTAGTTGCCAG
 CCATCTGTGTGTGCCCCCCCCCGTGCCTTCTTGACCCCTGGAAGGTGCCACTCCCACTGTCTTTCTC
 AATAAAATGAGGAATTCATCGCATGTCTGTAGTAGGTGTCACTTCTTCTTGGGGGTGGGGTGGGGCA
 GGACAGCAAGGGGGAGGATTGGGAAGACAATAGCAGGCATGCTGGGGATTCTAGAAGATCCGCTGTCTA
 ACAAGCCCGAAAGGAAGCTGAGTTGGCTGTGCCACCGCTGAGCAATAACTAGCATAAACCCCTGGGG
 CCTCTAAACGGGTCTTGAGGGTTTTTTTGTGTAAGGAGGAACTATATCCGGATATCCCGGGTGGGGCA
 AGAACTCCAGCATGAGATCCCGCGCTGGAGGATCATCCAGCCGGCGTCCCGGAAACAGGATCCGGAAGC
 CCAACCTTTCATAGAAGCGCGCGTGAATCGAAATCTCGTGATGGCAGGTTGGGCGTCCGTTGGTGGGT
 CATTCGAACCCAGAGTCCCGCTCAGAAGAACTCGTCAAGAAGGCGATAGAAGGCGATGCGCTGCGAA
 TCGGAGCGCGCATACCGTAAAGCACGAGGAAGCGGTCAGCCCATTCGCGCCAAAGCTCTTCAGCAATA
 TCACGGGTAGCCAACGCTATGTCTGATAGCGGTCCGCCACACCCAGCGCGCCACAGTGTGATGAATCCAG
 AAAAGCGGCCATTTTCCACCATGATATTGGCAAGCAGGCAATCGCATGTGTACAGAGATGCTCGCC
 GTCCGGCATCGCGCTTGAGCTTGGCAACAGTTCCGGCTGGCGCGAGCCCCGTATGCTCTTGTCCAGAT
 TCATCTCTGTGACGAAGACCGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGTTTTCGCTTGGTGGT
 GAATGGGCAAGTAGCCGATCAAGCGTATGACGCCCGCGCATTCGATCAGCCATGATGGATACTTCTCG
 CGAGGACCAAGGTGAGATGACAGGAGATCTGCCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTCC
 GCCTTCAGTGACAACGTCGAGCACAGCTGCGCAAGGAACGCCGCTGCTGGGCCAGCCAGATAGCCCGCT
 GCTTCGCTCTGCAGTTCATTACGGGCACCGGACAGGTCGCTCTGACAAAAAAGAACCGGGCGCCCTGG
 CTGACAGCCGGAACACGGCGGCATCAGAGCAGCCGATTGTCTGTGTGCCCCAGTCATAGCCGAATAGCCT
 CTCACCCAAAGCGCGCGGAGAACCTGGTGCAATCCATCTTGTCAATCATGCGAAACGATCCCTCATCT
 GTCTCTGTATCAGATCTGTATCCCTGCGCCATCAGATCCTTGGCGGCAAGAAAGCCATCCAGTTTACTTT
 GCAGGGCTTCCCAACCTTACCAGAGGGCGGCCAGCTGGCAATTCGGTTCGCTGTGTCATATAAACCC
 GCCCAGTCTAGCTATCGCCATGTAAAGCCACATGCAAGCTACCTGCTTCTTTCGCTTTCGCTTTCGCTT
 GTCCAGATAGCCAGTAGCTGACATTCATCCGGGGTCAGCACCGTTCTTCGCGGCTTCTACGTGTT
 CC GCTTCTTAGCAGCCCTTGGCGCCTGAGTGTCTGCGGCAGCGTGAAGCT

FIGURE 5



Add EcoRI and SacI
digestion enzymes

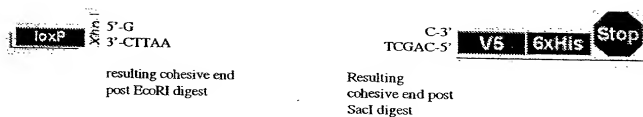


FIGURE 6

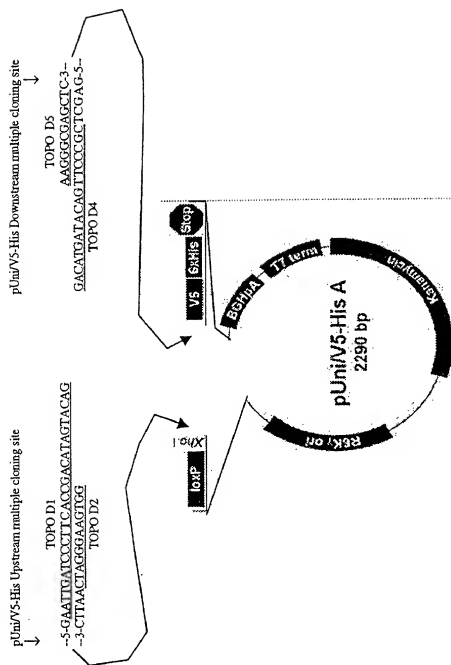


FIGURE 7

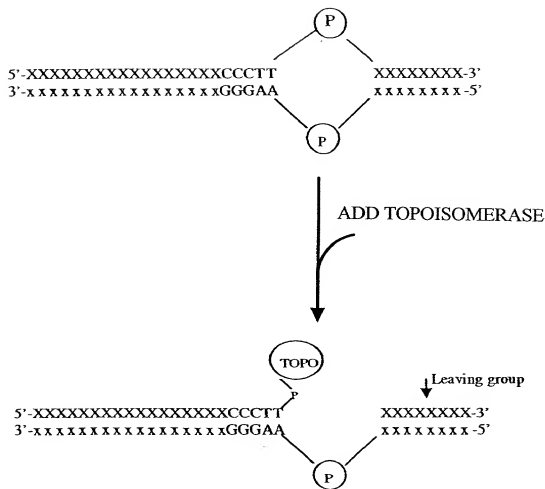


FIGURE 8

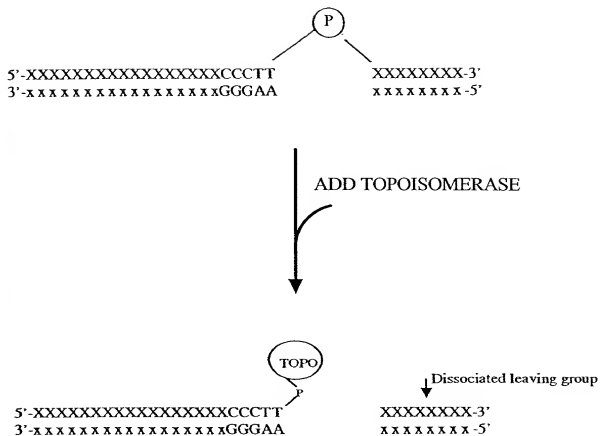


FIGURE 9

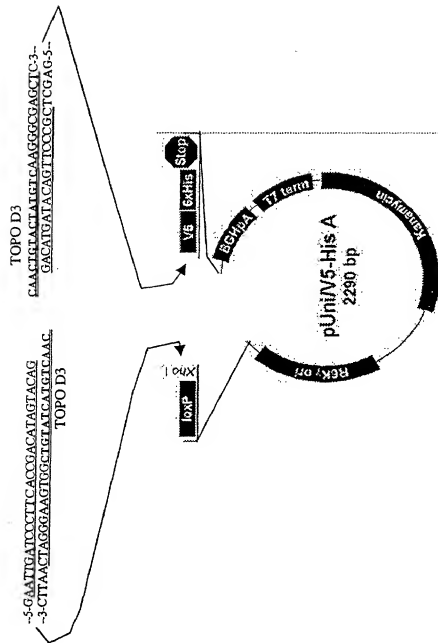


FIGURE 10

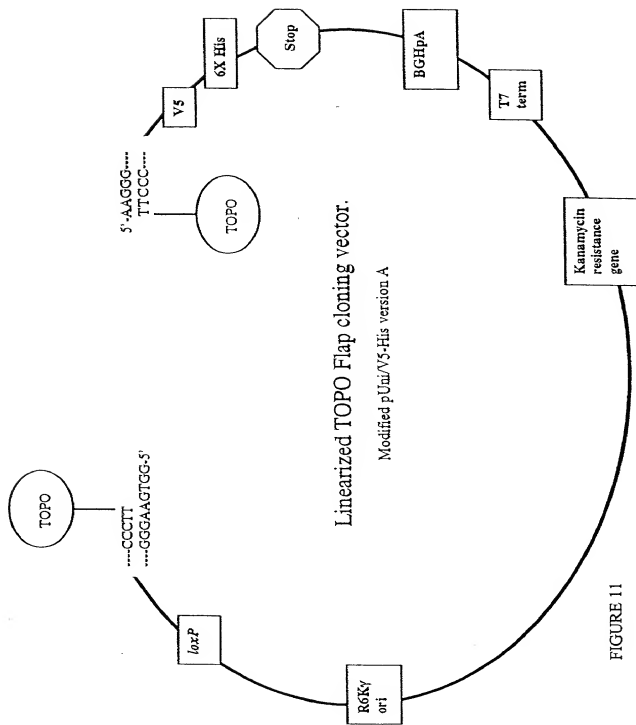
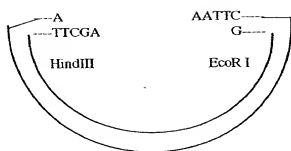


FIGURE 11

[illegible]

FIGURE 12

A



B

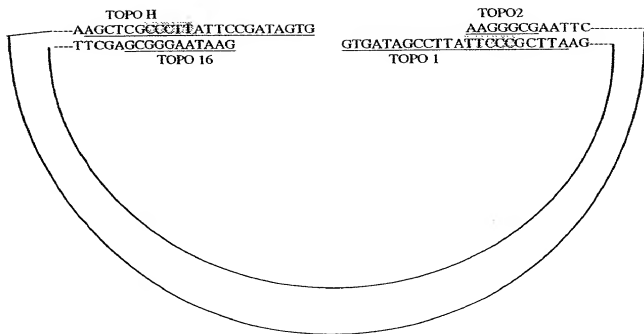


FIGURE 13

TTTCCG*GGGCGGG

TOPO H
 ---AAGCTCGGGCTTATTCGATAGTG
 ---TTGAGCGCGGAATAAGGCTATCAG
 TOPO 16
 TOPO 17

TOPO 3
 CAACACTATCGGAATAAGCGGAATTC
 GTGATAGCCTTATTCGGCTTAAG
 TOPO 1*

ADD TOPOISOMERASE



---AAGCTCGGGCTTATTCGATAGTG
 ---TTGAGCGCGGAATAAGGCTATCAG



CAACACTATCGGAATAAGCGGAATTC
 GTGATAGCCTTATTCGGCTTAAG

Leaving Groups

ATTCGATAGTG CAACACTATCGGAAT
 GCTATCAG GTGATAGCCTTA-



---AAGCTCGGGCTT
 ---TTGAGCGCGGAATAAG
 5'P

5'P

AAGCGGAATTC
 TTTGGGCTTAAG



FIGURE 14

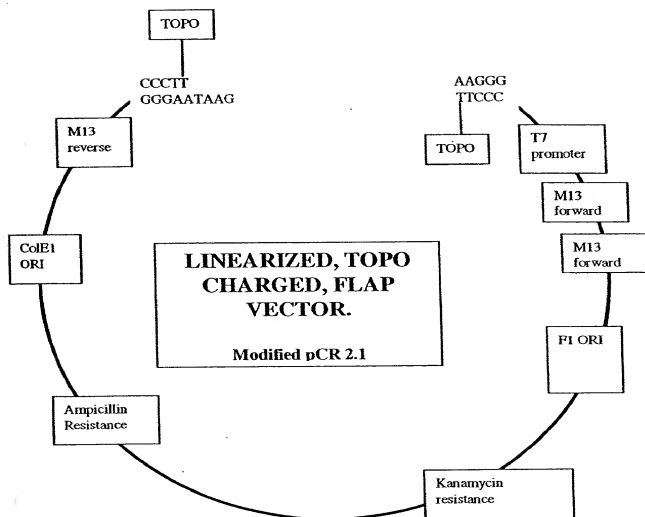


FIGURE 15

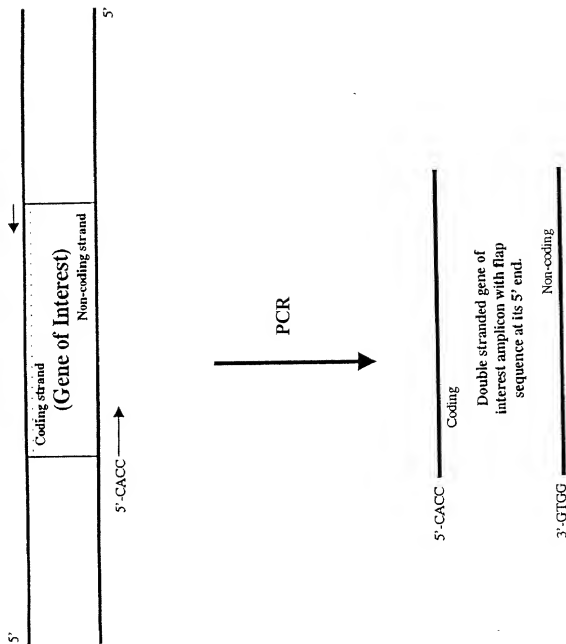


FIGURE 16

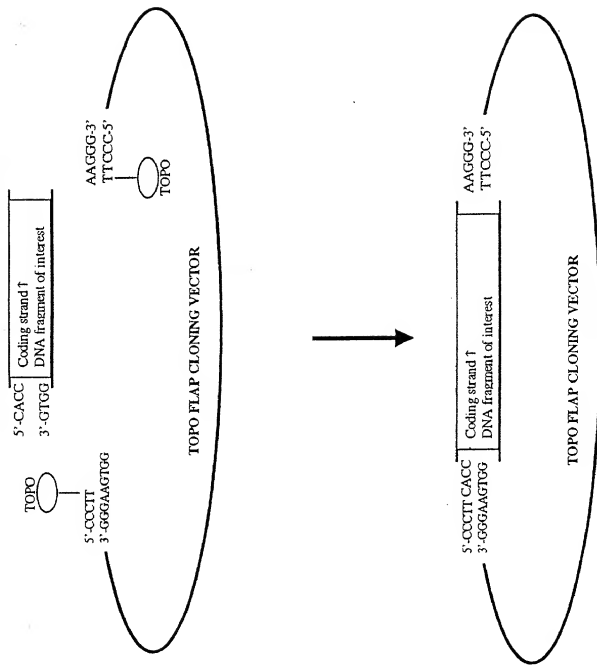


FIGURE 17